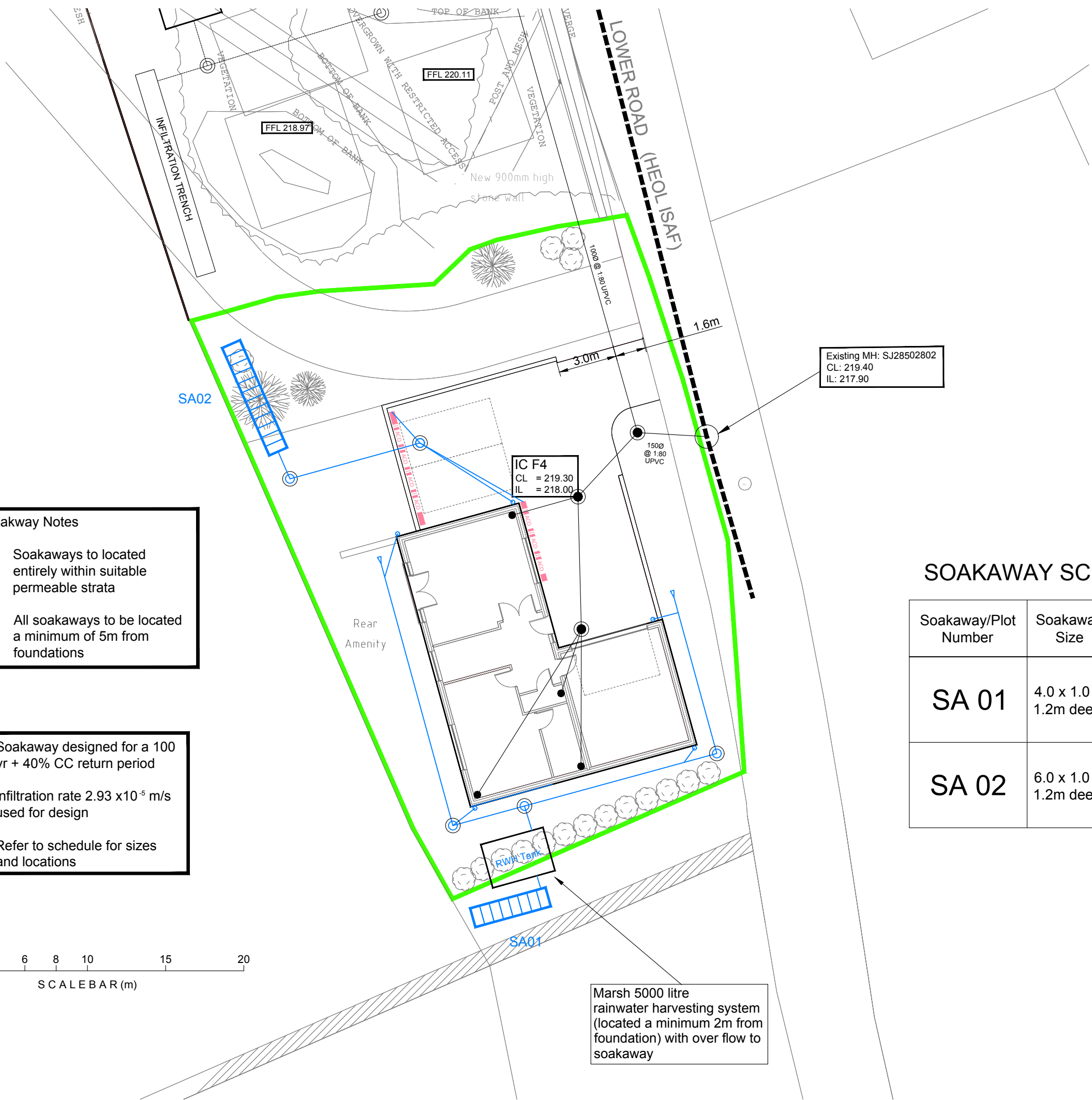


DO NOT SCALE



SW AREAS	
Roof	100
Driveway	140
Total	240

Impermeable Areas

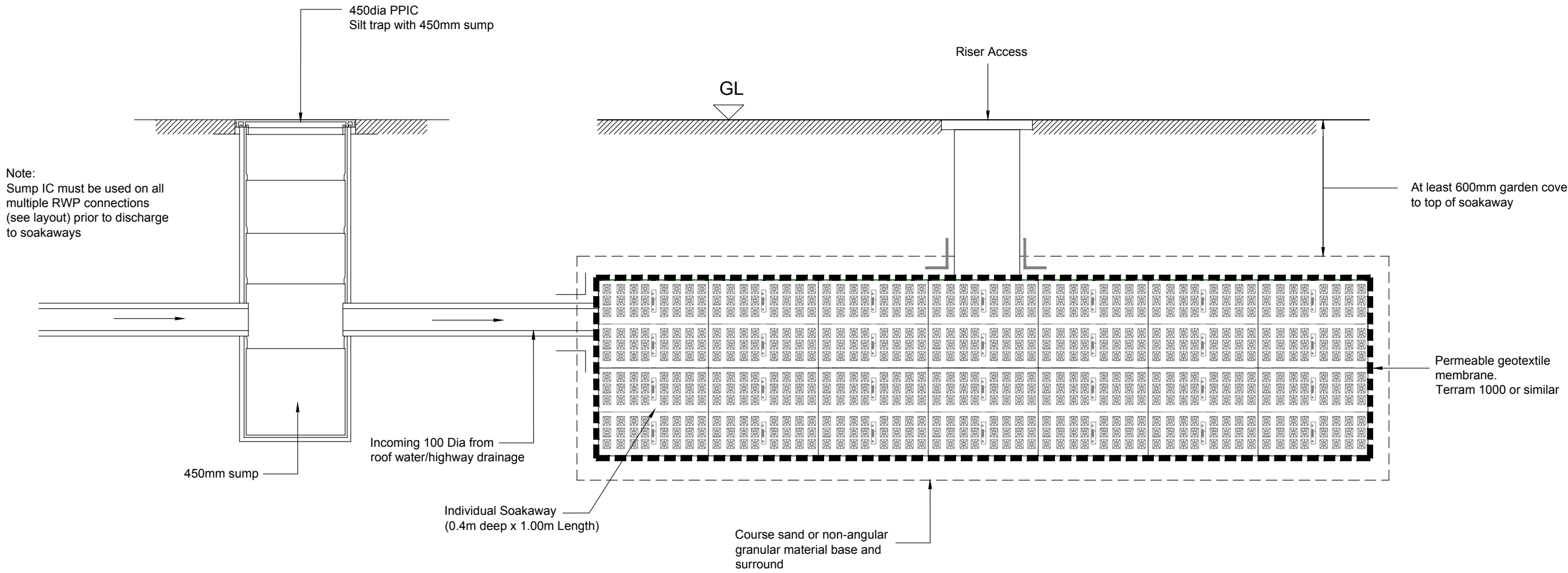


- Soakway Notes**
- Soakways to located entirely within suitable permeable strata
 - All soakways to be located a minimum of 5m from foundations

Soakaway designed for a 100 yr + 40% CC return period
Infiltration rate 2.93×10^{-5} m/s used for design
Refer to schedule for sizes and locations

Marsh 5000 litre rainwater harvesting system (located a minimum 2m from foundation) with over flow to soakaway

Proposed Drainage layout



Typical Geocellular Tank Soakaway System

Section (NTS)

AquaCell or similar approved with riser access for inspections and future maintenance

Surface Water Flow Rates

Developable Site Area = 620sq.m.

Existing Greenfiled Run-off Rates

1yr = 2.48 l/s
30yr = 6.08 l/s
100yr = 7.84 l/s

Proposed impermeable areas = 260sq.m.

Water Quality

Roof

Generally run-off from roof can be considered clean run-off and will not require any this treatment. All flows from the RWP's will drain to the rainwater harvesting tank. The overflow will direct any surplus flows during a storm event into a soakaway.

Hardstanding

All flows from the hardstanding will be directed to a drainage channel and discharge into a soakaway. A silt trap will be installed prior to flows being passed forward into the soakaway to intercept any silt / debris.

Drainage Strategy

Existing Drainage

The site is currently greenfield with no positive drainage. A foul manhole is present at the site entrance. This serves the 2 properties to the north of the site before discharging into the combined sewer in Lower Road.

Proposed Foul

Foul flows from the development will drain into the existing combined sewer located in the site entrance subject to a S106 connection.

Proposed Surface Water

- Collection for re-use**
Client is proposing to install a rainwater harvesting tank for water re-use within the dwelling.
- Infiltration**
Infiltration testing has determined the site is suitable for infiltration to dispose of surface water flows. We are proposing 2 separate soakaways. One for the driveway and a second to take the overflow from the rainwater harvesting tank.
- Watercourse**
There are no watercourses within the vicinity of the site.
- Surface water sewer**
There are no surface water sewers within the vicinity of the site.
- Combined sewer**
There is a combined sewers adjacent to the site in Lower Road. Infiltration testing has confirmed the site is suitable for infiltration technquest to dispose of surface water from the development so a connection into the combined is not required.

Maintenance / Responsibilities

Adoption and maintenance of all surface water components serving 2 or more properties subject to SAB approval.

This development is a single dwelling requiring SAB approval but not adoption. The owner will be responsible for the future maintenance of the surface water network.

All piped networks to have CCTV survey at end of construction activities. Any debris to be removed. Future maintenance to involve inspections to ensure no silt build ups within network.

A SUDS Management Plan will be produced to address frequency and type of maintenance activities for the silt traps and trench soakaway components.

General Notes

- Contractor to propose a suitable construction sequence for the soakaway construction and develop a detailed method statement.
- Excavation sides to adequately supported.
- Contractor to work in accordance with best practice ensuring all personnel have adequate PPE and confined space training.
- Excavation/plant to be secure from general public at all times
- Safe access and egress to be provided.

NOTES

- The specification in all respects shall be in accordance with the current Wrexham County Borough Council Specification and Construction publication in force in the county at the time of construction
- All adoptable drainage shall be constructed in accordance with 'Sewers for Adoption' 7th Edition, Welsh Ministers Standards and Welsh Water Details and Guidelines.
- All private drainage works are to comply fully with Part H of the Building Regulations.
- All existing invert levels to be checked by the contractor at the start of works and any other discrepancies notified to the Engineer prior to commencing works. All levels are based on topographical survey information provided by others.
- It is the responsibility of the Contractor to verify all information given with regards to existing services and drainage connections etc. prior to commencing the works.
- The Contractor shall adhere to the CDM Regulations at all times.
- Only trained personnel shall be permitted to enter confined spaces.
- All materials to bear the relevant B.S. Kitemark and comply fully with the Sewers for Adoption 7th Specification. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur to withstand a class 3 condition).
- All opening notices etc. as required under Highways Acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Welsh Water as applicable.
- Trench backfill in highways to within 1m of highway shall, as directed by the Highway Authority be a suitable granular material all in accordance with Sewers for Adoption.
- Cover loadings shall be as detailed on the Manhole Schedule.
- Drain trenches should not be excavated lower than the foundations of any building nearby unless either:
 - The trench is within 1m of the foundation, the trench is filled with concrete up to the lowest level of the foundation, or
 - Where the trench is further than 1m from the building, the trench is filled with concrete to a level below the lowest level for the building equal to the distance from the build, less 150mm.
- All SVP and RWP connections are indicative and shall be confirmed by the client.
- Pipe gradients out of the building to connecting manhole to be laid at 1:40 in accordance with Building Regulations, Part H, Table 6.
- Where pipe sizes are not indicated :
100Ø to be used for foul
100Ø to be used for surface water unless stated otherwise.
- Minimum surface water gradients shall be:
100Ø laid at 1:100 with the exception of the first connection which shall be minimum 1:60. 150Ø laid at 1:150
- Minimum 100Ø foul drainage gradient to be 1:80 with the exception of the first connection which shall be minimum 1:40.
- Manhole covers to be marked FWS or SW as appropriate.
- All manhole covers and frames shall comply with BS EN124. All adoptable manholes and chambers shall comply with Sewers for Adoption 7th Edition. Covers in roads to be grade D400 and be 150mm deep. Manhole covers in car parking areas and drives to be grade B125 and covers in landscaping areas to be grade A15. All to be sized in accordance with Building Regulations Part H, Tables 11 & 12.
- Pipes have not been designed to accommodate construction traffic loading. The contractor is responsible for providing adequate protection to the pipes during construction.

APPROVAL

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Chester
CH4 9QU

Client

J.A. Williams

Project

Land Adjacent to Nant Cottage
Lower Road, Coedpoeth, Wrexham

Title

Drainage Layout

DRAWING NUMBER

7679 / SK01

SCALE at A1 1:250

DATE	29.03.21	REVISION
DRAWN	PW	-
CHECKED	AJ	-